High Efficiency Technology

Hyper Inverter

Our new advanced technology has realized high efficiency, strong heating and long piping. This contributes to the environmental protection through energy saving and permits installation of the units (11~16kW) considering a heating operation under temperature conditions down to -20˚C and design flexibility has been improved by extension of piping length to 100m.

WIRED REMOTE CONTROLLER AND CONTROL BOX IS ADOPTED STANDARD.

Control box

HIGH EFFICIENT PLATE HEAT EXCHANGER

No backup heater!

Usable outdoor temperature:
-20°C

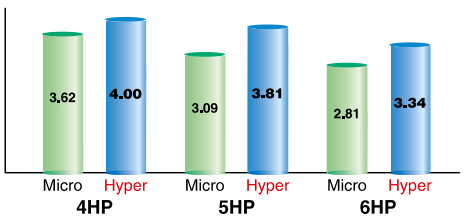
9 kW

11-16 kW

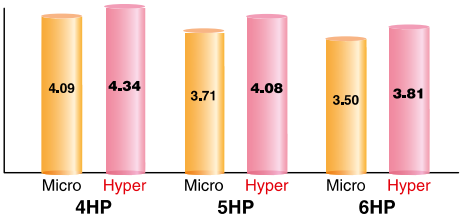
High efficiency

The industry's highest COP levels are achieved by our latest technologies, such as new high efficient twin rotary compressors and the combination with new Hyper inverter outdoor units.

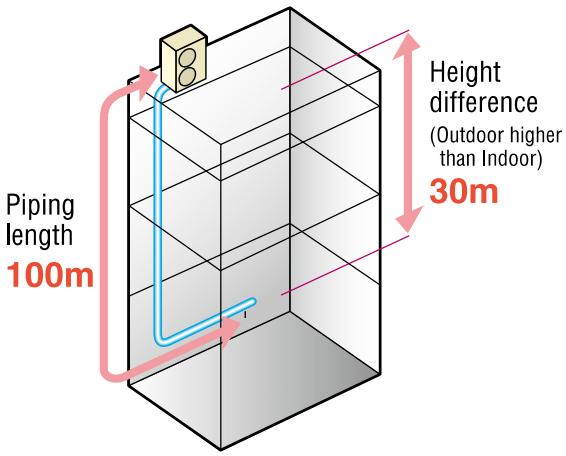
EER in cooling



COP in heating

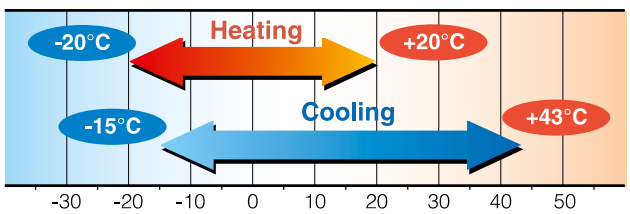


Long piping (in case of 11-16kW)



Strong heating (in case of 11-16kW)

-20°C: Heating operation down to -20°C
-15°C: Nominal heating capacity maintained at -15°C



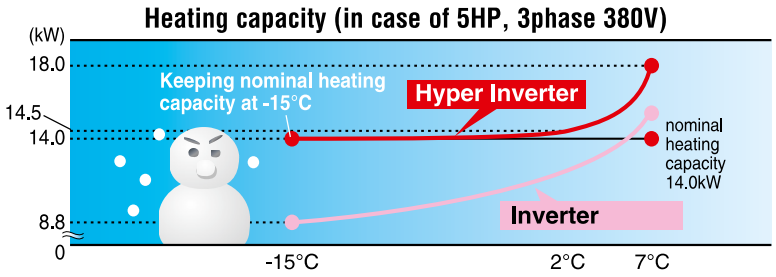
Max.heating capacity (kW)

	Hyper Inverter	Inverter
FDC100VSX(4HP, 3phase 380V)	**16.0**	12.5
FDC125VSX(5HP, 3phase 380V)	**18.0**	16.0
FDC140VSX(6HP, 3phase 380V)	**20.0**	16.5

Leading powerful heating capacity in the industry

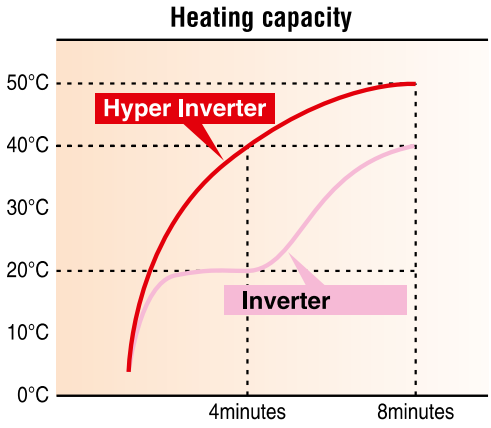
Thanks to optimization of refrigeration control with use of electric expansion valve and development of new twin rotary compressors, max heating capacity has been increased.
Hyper Inverter series can reach the set temperature very quickly, keeping nominal heating capacity when outdoor temperature is -15°C. It is effective to be used even in cold area.

Temperature of supply air can reach 40°C in 4 minutes after start up under low temperature operation conditions (at both indoor and outdoor temperature of 2°C) and can reach 50°C in 8 minutes after that.



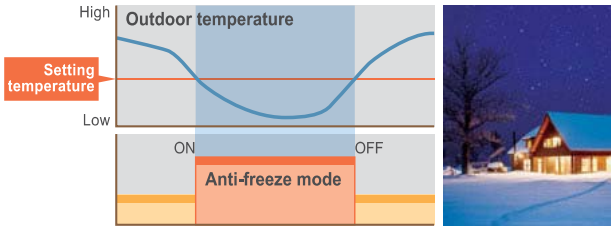
model name	nominal heating capacity (kW at outdoor temperature of 7°C)	heating capacity at outdoor temperature of -15°C
FDC100VSX (3phase 380V)	11.2kW	11.2kW
FDC125VSX (3phase 380V)	14.0kW	14.0kW
FDC140VSX (3phase 380V)	16.0kW	16.0kW

Please refer to our technical manual for installation conditions, operation range and heating/cooling capacities. (including 1phase 220V)



ANTI-FREEZE FUNCTION & Base heater

Water circulation and compressor can be automatically performed at low outdoor temperature. Freezing of circulated water can be prevented.



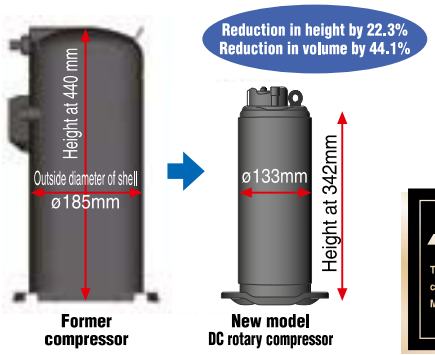
Base heater
Automatical activation when temperature drops below 0˚C.

DC FAN MOTOR

High performance,
high efficiency small DC fan motor mounted.

Size reduction and high efficiency performance on the DC twin rotary compressors

Employment of DC twin rotary compressor has enabled to utilize a high-speed range of up to 120 rps at the maximum to secure the required capacity.
Optimum compressor control has been realized by employing the vector control* and the starting current has been improved significantly compared with former models. Moreover, vibration has been reduced.



* Vector control means a. technique to realize an optimum control by converting the current wave to a smooth sinusoidal waveform

Blue Fin

Due to application of blue coated fins (KS101) for the heat exchanger of new outdoor unit, corrosion resistance has been improved compared to current models.

Blue Fin

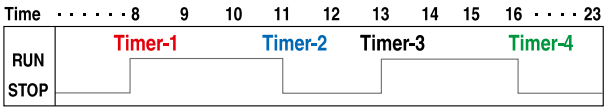
Wired remote control with weekly timer

The RC-E5 control enables extensive access to service and maintenance technical data combined with easy to use functions and a clear LCD display.

Weekly timer function as standard

RC-E5 provides (as a standard feature) a weekly timer, which allows one-week operation schedules to be registered. A user can specify up to four times a day to start/stop the air conditioner. (Temperature setting is also possible with the timer).

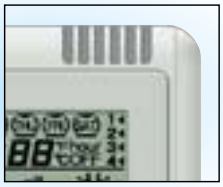
Timer operation



Run hour meters to facilitate maintenance checking

RC-E5 stores operation data when an anomaly occurs and indicates the error on the LCD. It also displays cumulative operation hours of the air conditioner and compressor since commissioning.

Room temperature controlled by the remote control sensor



The temperature sensor is housed in the top section of the remote control unit. This arrangement has improved the sensitivity of the remote control unit's sensor, which permits more finely controlled air conditioning.

Changeable set temperature ranges

RC-E5 allows the upper and lower limits of a set temperature range to be specified separately.
By adjusting a set temperature range, you can ensure energy saving air conditioning by avoiding excessive cooling or heating.

	Changeable range
Upper limit	20~30°C(effective for heating operation)
Lower limit	18~26°C(effective for non-heating operation)

eco touch CONTROL (option)

LCD contrast setting
Back light setting
Control sound
Outdoor silent mode
Summer time setting
Home leave mode
Indoor & outdoor temperature display Heating standby display
Defrosting operation display
Administrator settings
Sleep timer
Peak cut timer
Automatic temperature set back
Weekly timer
Set ON/OFF timer
Next service date display Contact company display USB connection (mini-B)
...

NEW

RC-EX1A

eco touch

Setting temperature screen

Run / Stop

High power operation

The highest capacity operation (Max 15 minutes)
•Increasing compressor speed
•Increasing power

Energy-saving operation

•Changes set temperature.
At 28°C in cooling mode and 22°C in heating mode, 25°C in auto mode.
•Operation correction by outdoor temperature

MITSUBISHI HEAVY INDUSTRIES, LTD.

Technical Specifications 9 - 16kW

Control box

Remote control
Wired

RC-EX1A(Option)
RC-E5

Outdoor units

Model		**SRC 80ZM-S**	**FDC 100VSX**	**FDC 125VSX**	**FDC 140VSX**
Power supply		220 V, 50Hz	3 Phase 380V 50Hz		
Type		*Inverter*	Hyper Inverter		
Function		Heating – Cooling – DWH*			
Heating	Capacity (kW)	**9.0** [1.7 (Min.)~ 10.5 (Max.)]	**11.2** [4.0(Min.)~ 16.0(Max.)]	**14.0** [4.0(Min.)~ 18.0(Max.)]	**16.0** [4.0(Min.)~ 20.0(Max.)]
	Input (kW)	2.57	2.58	3.77	4.42
	COP	3.50	4.34	3.71	3.62
Cooling	Capacity (kW)	**8.0** [2.15 (Min.)~ 9.0 (Max.)]	**10.0** [4.0(Min.)~ 11.2(Max.)]	**12.5** [5.0(Min.)~ 14.0(Max.)]	**14.0** [5.0(Min.)~ 16.0(Max.)]
	Input (kW)	2.35	2.50	3.49	4.28
	EER	3.40	4.00	3.58	3.27
Refrigerant piping	size	ϕ15.88 / ϕ6.35	ϕ15.88 / ϕ9.52		
Sound pressure level	dB(A)	48~57	48~50	48~50	49~52
Minimum pipe length	m	3	5		
Maximum pipe length	m	30 (15m Pre-charged)	100 (30m Pre-charged)		
Maximum height differen	m	20	20		
Operation range(heating mode)	Outdoor ambient °C	-15 ~ 35°C	-20 ~ 35°C		
Leaving water temperature heating	Thermostat control °C	20 ~ 55°C			
Leaving water temperature cooling	Thermostat control °C	10 ~ 25°C			
Leaving water temperature domestic hot water tank*	Thermostat control °C	25 ~ 58°C			
Water inlet/outlet pipe connection	in	3/4”	1”		
Outdoor unit Dimension/weight	HxWxD mm / Kg	845 x 970x 370 / 63kg	1300×970×370 / 105kg		
Control thermostat box Dimension /weight	HxWxD mm / Kg	300 x 400 x 90/0.5kg			

*In case of DWH
Control box is equipment with one more thermostat controller

* The capacities in this catalogue are calculated based on following conditions:
Heating:
Leaving hot water temperature: 35°C (ΔT 5°C).
Outdoor air temperature: 7 °C DB / 6 °C WB.
Cooling:
Leaving cold water temperature: 10°C (ΔT 5°
C). Outdoor air temperature: 35 °C DB.
The sound pressure level is given at 1 m distance from outdoor units.

R410A